UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
Address: COMMISSIONER FOR PATENTS
P.O. Box 1450
Alexandria, Virginia 22313-1450
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/782,062	02/14/2001	Kenji Nishi	108601	1857

25944 7590 05/18/2005

OLIFF & BERRIDGE, PLC
P.O. BOX 19928
ALEXANDRIA, VA 22320

EXAMINER
STOCK JR, GORDON J

ART UNIT	PAPER NUMBER
2877	

DATE MAILED: 05/18/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No.	Applicant(s)	
	09/782,062	NISHI, KENJI	
	Examiner	Art Unit	
	Gordon J. Stock	2877	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *08 February 2005*.

2a)☐ This action is **FINAL**. 2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1-10,23-29,53,54 and 56-58* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1-10,23-29,53,54 and 56-58* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☒ The drawing(s) filed on *14 February 2001* is/are: a)☒ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☒ All b)☐ Some * c)☐ None of:

1.☒ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☐ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☒ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) Paper No(s)/Mail Date *20050208*.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____.
5) ☐ Notice of Informal Patent Application (PTO-152)
6) ☐ Other: _____.

DETAILED ACTION

Claim Rejections - 35 USC § 112

1. The following is a quotation of the second paragraph of 35 U.S.C. 112:

> The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

2. **Claims 1-10, 23-29, 53-54, 56-58** are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

The term "little gas release" in **claims 1, 6, 23, 56, 57, and 58** is a relative term which renders the claim indefinite. The term "little gas release" is not defined by the claim, the specification does not provide a standard for ascertaining the requisite degree, and one of ordinary skill in the art would not be reasonably apprised of the scope of the invention. "Little gas release" renders the gas permeability of the inner wall member indefinite. **Claims 2-5, 7-10, 24-29, 53, and 54** are rejected for being depended upon a rejected base claim.

Claim Rejections - 35 USC § 112 and - 35 USC § 101

3. The following is a quotation of the second paragraph of 35 U.S.C. 112:

> The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

35 U.S.C. 101 reads as follows:

> Whoever invents or discovers any new and useful process, machine, manufacture, or composition of matter, or any new and useful improvement thereof, may obtain a patent therefor, subject to the conditions and requirements of this title.

4. **Claim 2** is rejected under 35 U.S.C. 112 second paragraph as being indefinite, for **claim 2** claims both a method and the exposure apparatus including "a transport system ... management" A single claim which claims both an apparatus and the method steps of using the

apparatus is indefinite under 35 U.S.C. 112, second paragraph. *In Ex parte Lyell, 17 USPQ2d 1548 (Bd. Pat. App. & Inter. 1990).*

Claim 2 is rejected under 35 U.S.C. 101 based on the theory that **claim 2** is directed to neither a "process" nor a "machine," but rather embraces or overlaps two different statutory classes of invention set forth in U.S.C. 101 which is drafted so as to set forth the statutory classes of invention in the alternative only. *Id.* at 1551.

Claim Rejections - 35 USC § 103

5. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

6. **Claims 1-10, 23-25, 29, 53-54, 56-58** are rejected under 35 U.S.C. 103(a) as being unpatentable over **Masaaki et al. (JP 07-240366)-cited by applicant** in view of **Miyai et al. (5,825,470).**

As for **claims 1-5, 53, 56,** Masaaki discloses the following: importing a second object, a wafer, adjusting a position of the wafer with respect to the movable stage, installing the wafer on the movable stage, moving the movable stage to adjust the position of the wafer respect to an exposure position (paragraphs 0038-0041) into the stage chamber (Fig. 2: 32); wherein exposure is performed (paragraph 0037); wherein, a gas, cooled air, is used for exposure (Fig. 2: 31); and management is used to allow only an impurity, an ammonium ion, in one chamber over the stage chamber via HEPA filters (paragraph 0036); in addition, another movable support for the reticle is provided and another stage chamber, reticle transport chamber, accommodates the other reticle

support system with importing of the reticle to the another stage chamber; adjusting the position of the reticle with the reticle stage and moving the other movable stage to adjust position the reticle for exposure (paragraphs 0019-0021; 0051); wherein the first object is a mask, a reticle, and the second object is a wafer, a substrate (paragraphs 0048-0049); wherein, the stage chamber and the movable stage of the exposure apparatus are incorporated into the exposure apparatus in accordance with a module system (Fig. 2: 32). As for the respective chambers being airtight, Masaaki does not explicitly state this, but he discloses that the system should be dust free (paragraph 0003). Miyai in a exposure system teaches that the system should be dust free and have controlled humidity and temperature (col. 8, lines 1-15). Therefore, it would be obvious to one of ordinary skill in the art at the time the invention was made to have the chambers airtight in order to prevent dust from the outside getting in and to be able to adequately control humidity and temperature of the system. As for a member having little gas release, Masaaki does not explicitly state this, but Examiner takes Official Notice that chambers comprise stainless steel members for durability and glass members such as windows in order to observe the system from the outside. Therefore, it would be obvious to one of ordinary skill in the art at the time the invention was made that the chambers comprised members with little gas release, glass and stainless steel members in order to observe the interior environment from the outside and to provide a durable structure.

As for **claims 6-10, 54, 57,** Masaaki discloses the following: transporting the second object, substrate wafer, to a movable stage by the aid of a transport system (paragraph 0038-0041) using a contour basis for positional adjustment (paragraphs 0044-0046); wherein exposure is performed (paragraphs 0037, 0048, 0049); wherein adjusting of the position of the second

object with respect to the movable stage after positional adjustment with respect to the transport system and adjusting after being placed on the movable stage with respect to exposure light system on the basis of a positional adjustment mark (paragraph 0045, 0057). In evidence, Miyai teaches an alignment system for positioning the wafer in the exposure position (col. 9, lines 60-65). And Masaaki teaches the stage chamber and the movable stage of the exposure apparatus are incorporated into the exposure apparatus in accordance with a module system (Fig. 2: 32); wherein the first object is a mask, a reticle, and the second object is a wafer, a substrate (paragraphs 0048-0049). As for the respective chambers being airtight, Masaaki does not explicitly state this, but he discloses that the system should be dust free (paragraph 0003). Miyai in a exposure system teaches that the system should be dust free and have controlled humidity and temperature (col. 8, lines 1-15). Therefore, it would be obvious to one of ordinary skill in the art at the time the invention was made to have the chambers airtight in order to prevent dust from the outside getting in and to be able to adequately control humidity and temperature of the system. As for a member having little gas release, Masaaki does not explicitly state this, but Examiner takes Official Notice that chambers comprise stainless steel members for durability and glass members such as windows in order to observe the system from the outside. Therefore, it would be obvious to one of ordinary skill in the art at the time the invention was made that the chambers comprised members with little gas release, glass and stainless steel members in order to observe the interior environment from the outside and to provide a durable structure.

As for **claims 23, 24, 25, 29, 58,** Masaaki discloses the following: a movable stage (Fig. 2: 11a, 10); a transport system in a transport chamber including a handling mechanism with a

rotary stand, a first hand and second hand both rotatable, a contour detecting system, an arm mechanism which has at least one degree of freedom with an arm and a driving unit (paragraphs 0044-0046; Fig. 2: 33a; Fig. 1: 11E-11G; Figs. 3 and 6); temperature control system, air conditioning systems (paragraph 0020). And Masaaki teaches the stage chamber and the movable stage of the exposure apparatus are incorporated into the exposure apparatus in accordance with a module system (Fig. 2: 32). As for the respective chambers being airtight, Masaaki does not explicitly state this, but he discloses that the system should be dust free (paragraph 0003). Miyai in a exposure system teaches that the system should be dust free and have controlled humidity and temperature (col. 8, lines 1-15). Therefore, it would be obvious to one of ordinary skill in the art at the time the invention was made to have the chambers airtight in order to prevent dust from the outside getting in and to be able to adequately control humidity and temperature of the system. As for a member having little gas release, Masaaki does not explicitly state this, but Examiner takes Official Notice that chambers comprise stainless steel members for durability and glass members such as windows in order to observe the system from the outside. Therefore, it would be obvious to one of ordinary skill in the art at the time the invention was made that the chambers comprised members with little gas release, glass and stainless steel members in order to observe the interior environment from the outside and to provide a durable structure.

Allowable Subject Matter

7. **Claims 26-28** would be allowable if rewritten to overcome the rejection(s) under 35 U.S.C. 112, 2nd paragraph, set forth in this Office action and to include all of the limitations of the base claim and any intervening claims.

As to **claim 26**, the prior art of record, taken alone or in combination, fails to disclose or render obvious in an exposure apparatus, an airtight stage chamber, an airtight first transport chamber, an airtight second transport chamber with closable openings, in combination with the rest of the limitations of **claims 26-28.**

Response to Arguments

8. Applicant's arguments with respect to the claims have been considered but are moot in view of the new ground(s) of rejection.

Conclusion

Several facts have been relied upon from the personal knowledge of the examiner about which the examiner took Official Notice. Applicant must seasonably challenge well known statements and statements based on personal knowledge when they are made by the Board of Patent Appeals and Interferences. In re Selmi, 156 F.2d 96, 70 USPQ 197 (CCPA 1946); In re Fischer, 125 F.2d 725, 52 USPQ 473 (CCPA 1942). See also In re Boon, 439 F.2d 724, 169 USPQ 231 (CCPA 1971) (a challenge to the taking of judicial notice must contain adequate information or argument to create on its face a reasonable doubt regarding the circumstances justifying the judicial notice). If applicant does not seasonably traverse the well-known statement during examination, then the object of the well known statement is taken to be admitted prior art. In re Chevenard, 139 F.2d 71, 60 USPQ 239 (CCPA 1943). A seasonable challenge constitutes a demand for evidence made as soon as practicable during prosecution. Thus, applicant is charged with rebutting the well-known statement in the **next reply** after the Office action in which the well known statement was made.

Fax/Telephone Numbers

If the applicant wishes to send a fax dealing with either a proposed amendment or a discussion with a phone interview, then the fax should:

1) Contain either a statement "DRAFT" or "PROPOSED AMENDMENT" on the fax cover sheet; and

2) Should be unsigned by the attorney or agent.

This will ensure that it will not be entered into the case and will be forwarded to the examiner as quickly as possible.

Papers related to the application may be submitted to Group 2800 by Fax transmission. Papers should be faxed to Group 2800 via the PTO Fax machine located in Crystal Plaza 4. The form of such papers must conform to the notice published in the Official Gazette, 1096 OG 30 (November 15, 1989). The CP4 Fax Machine number is: **(703) 872-9306**

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Gordon J. Stock whose telephone number is (571) 272-2431. The examiner can normally be reached on Monday-Friday, 10:00 a.m. - 6:30 p.m.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Gregory J. Toatley, Jr., can be reached at 571-272-2800 ext 77.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private Pair system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

gs
May 16, 2005

Layla Lauchman
Primary Examiner
Art Unit 2877